

XXXIX.—*Descriptions of new Species of Fossorial Hymenoptera in the Collection of the British Museum.* By FREDERICK SMITH, Assistant in the Zoological Department of the British Museum.

[Continued from p. 260.]

Genus CHLORION, Latr.

Chlorion regalis.

Female. Length 15 lines. Black; head, pro- and mesothorax bright light red; the abdomen purple. Mandibles obscure ferruginous, with their tips black; the apical joints of the antennæ slightly fuscous above; the anterior margin of the clypeus with four equidistant, short, angular, acute teeth. Thorax: the metathorax, pectus, sides, coxæ, trochanters, base of the intermediate femora beneath, the posterior legs and intermediate tarsi black; the posterior tibiæ with an obscure ferruginous tinge; wings dark brown, with a violet iridescence; the hind wings have their apical margins clear hyaline; the anterior portion of the prothorax, and the metathorax above, transversely finely striated. Abdomen smooth and shining, its colour changing from bright purple to shades of blue or violet in different lights.

Hab. The Beluchistan district; Afganistan; and Sind.

This beautiful insect was taken by Dr. Leith, and also by Major T. Le Mesurier.

Genus SPHEX, Linn.

Sphex torrida.

Female. Length 13–15 lines. Black, wings bright ferruginous, with broad dark fuscous apical margins. Head: the mandibles falcate, very stout, terminating in an acute point and with a stout acute tooth about the middle of their inner margin; the face silvery and thickly set with erect black hairs. The posterior margin of the prothorax with silvery pubescence; the metathorax with black pubescence; the scutellum with a central impressed line; the postscutellum with two minute tubercles; beyond the enclosed cells the wings are dark fuscous, with a slight violet iridescence. Abdomen smooth and shining, with a somewhat obscure blue tinge.

Hab. Madagascar.

Sphex tuberculata.

Female. Length 13 lines. Black, with the posterior tibiæ and

femora ferruginous. Head densely clothed with golden-coloured pubescence, the cheeks with long hairs of the same colour. Thorax smooth and shining above, the sides and also beneath thinly clothed with long golden-coloured pubescence; it is much more dense on the metathorax, on the sides, and towards the apex; the base of the metathorax transversely striated; the postscutellum bituberculate; wings hyaline, the nervures black, the apical margin of the superior pair faintly clouded; a dark fuscous spot at the apex of the marginal cell; the tibiæ and tarsi very spinose. Abdomen black, with a faint tinge of blue.

Hab. Sierra Leone.

Genus AMPULEX, Jurine.

Ampulex apicalis.

Female. Length 6 lines. Varied with tints of blue and green, the scape of the antennæ and apex of the abdomen ferruginous. Head blue or green, covered with deep confluent punctures; the clypeus and mandibles ferruginous; the clypeus with a sharp carina in the middle, its anterior margin subangular. The pro- and mesothorax with large confluent punctures, the former slightly narrowed towards the head; the metathorax transverse, the posterior lateral angles dentate, the superior surface with a raised margin, a central longitudinal carina that runs from the base a little beyond the middle, where it divides into a fork which runs to the posterior margin, on each side are three oblique carinæ, between the carinæ coarsely striated; wings fuscous, with a hyaline fascia crossing the superior pair at the base of the first submarginal cell; the apex of the wing is subhyaline. Abdomen smooth and shining, delicately and sparingly punctured, the three apical segments ferruginous.

Hab. South Africa (Zulu country).

This species belongs to the section of the genus *Ampulex* which has only two submarginal cells.

Genus DOLICHURUS, Latr.

Dolichurus levis.

Female. Length 4 lines. Black, smooth and shining, the abdomen brightest. Head very closely and very delicately punctured, with a few irregularly intermixed larger punctures; a tubercle in the middle of the face concave above, with its anterior margin whitish; the palpi, base of the mandibles, and the clypeus yellowish white, the anterior margin

of the latter rounded; the antennæ fulvous beneath. Thorax: the prothorax flattened at the sides, and deeply depressed in the middle above, forming on each side an obtuse tubercle; the mesothorax with two deeply impressed longitudinal lines; the metathorax rugose, with a horseshoe-shaped small enclosed smooth shining space at its base; this space is again enclosed by a longer but similar-shaped space, which is longitudinally strigose; the apex abruptly truncate, the truncation sharply margined above, finely rugulose, and thinly covered with white pubescence; wings subhyaline and iridescent, the nervures black; the anterior tibiæ, the tarsi, and also the intermediate pair ferruginous. The abdomen smooth and shining; the apical segment, and the margins of the other segments, narrowly rufo-piceous.

Hab. Brazil (Ega and St. Paulo).

The colouring of the legs differs in the two specimens, one being lighter than the other, the extreme tips of the femora being ferruginous.

Family Larridæ.

Genus LARRADA, Smith.

Larrada vestita.

Female. Length $5\frac{1}{2}$ lines. Head and thorax black, the two basal segments of the abdomen and half of the third ferruginous. Head and thorax densely covered with short white pubescence; on the face it is bright and silvery, it is the same on the legs; the apical joints of the tarsi ferruginous; the wings clear hyaline; the tegulæ and nervures ferruginous; the apical margins of the segments of the abdomen with bright silvery fasciæ.

Hab. N. India.

Larrada cælestina.

Female. Length 7 lines. Black, head and thorax semi-opaque; abdomen shining. Head closely and finely punctured; the face, as high as the insertion of the antennæ, covered with silvery pile. The thorax closely and finely punctured above; the metathorax obliquely striated, with punctures intermixed; the legs, and the thorax beneath, with a fine changeable silvery pile; the tarsi obscure fusco-ferruginous; the wings dark fuscous and having a purple iridescence, the posterior pair palest. Abdomen pilose at the sides and beneath, the apical margins more or less obscurely rufo-testaceous.

Hab. China (Hong Kong).

Larrada ferox.

Female. Length $8-8\frac{1}{2}$ lines. Head and thorax black, abdomen and legs ferruginous. The head and thorax adorned with short silky glittering pubescence, usually more or less abraded on the disk of the mesothorax, scutellum, and metathorax above; the latter obliquely, finely, and evenly striated; the scape of the antennæ in front and the mandibles ferruginous; the coxæ, trochanters, and the anterior and intermediate femora beneath black; the wings fulvo-hyaline and faintly clouded at their apical margins. Abdomen smooth, shining, and with only a few scattered delicate punctures.

Hab. Africa.

Larrada diabolica.

Female. Length $10\frac{1}{2}$ lines. Black, with the head, and thorax anteriorly, covered with bright golden pubescence. Head: the scape and four or five of the joints of the flagellum, and the mandibles, ferruginous, the tips of the latter black. The anterior femora, tibiæ, and tarsi ferruginous; wings dark brown, with a purple iridescence; the scutellum smooth and shining; the metathorax opaque. Abdomen smooth, shining, and impunctate; the apical segment ferruginous.

Hab. Sierra Leone; Port Natal.

This species is most closely allied to *L. aurulenta*; but its legs are black and its wings darker; it may nevertheless be a climatal variety of that species.

Larrada clypeata.

Female. Length $6\frac{1}{4}$ lines. Entirely black; the anterior margin of the clypeus emarginate in the middle, the lateral angles forming two blunt tubercles or teeth; the clypeus and sides of the face thinly covered with silvery pile. The mesothorax and scutellum shining, and closely and finely punctured; the metathorax opaque, with a longitudinal central channel, on each side of which it is indistinctly and finely striated obliquely in the middle, but more strongly and irregularly so at the sides; the wings fusco-hyaline, the neuration black. Abdomen smooth, shining, and very finely and closely punctured.

Hab. New Caledonia.

Larrada crassipes.

Female. Length 7 lines. Entirely black; wings fuscous, hyaline towards their base, the nervures black. Head densely covered in front, as high as the ocellus, with bright silvery pile; that on the clypeus has a faint golden tint. The thorax,

from the scutellum forwards, covered with pale golden pile; the metathorax at the sides and behind with a covering of bright silvery pile; the legs stout; the tibiæ and tarsi thickly spinose. The apical margins of the segments of the abdomen with bright silvery fasciæ, the fasciæ widen both in the middle and at the sides; the apical segment with divergent striae.

Male. About 6 lines long. Body and legs more slender; the head and thorax more pubescent; wings the same as in the other sex; the basal segment of the abdomen covered with silvery pile; the other segments fasciated, the apical one pilose.

Hab. South Australia.

Genus PISON, Spin.

Pison maculipennis.

Female. Length 5 lines. Black, with the thorax, legs, and basal segment of the abdomen ferruginous; wings with two large fuscous maculæ. Head: the scape and four basal joints of the flagellum of the antennæ, the clypeus, and mandibles ferruginous, the latter black at their tips; the head above the clypeus, as high as the insertion of the antennæ, and the orbits of the eyes with glittering pale golden pubescence. Thorax: the posterior margin of the prothorax, of the mesothorax, a line on each side of the postscutellum, and the base of the metathorax adorned with golden pubescence, on the sides of the latter it is inclined to silvery brightness; the sides of the metathorax and the postscutellum black; wings flavo-hyaline, with a dark fuscous macula occupying the externo-median cell, and extending more or less into the posterior wing; another occupying the marginal cell; the nervures surrounding these maculæ black, the rest of the nervures and also the stigma pale testaceous; the apical joints of the intermediate and posterior tarsi fuscous. Abdomen: the apical margins of the two basal segments, and sometimes of the third (much more narrowly), yellowish white; the second segment more or less black at the base.

Hab. Brazil (Ega and Para).

Pison pilosus.

Female. Length 4 lines. Black; the abdomen shining, and covered with a pale golden pile, that on the legs silvery. Head: the cheeks and inner orbits of the eyes with bright silvery pile; the mandibles ferruginous at their apex. Thorax shagreened; the sides of the metathorax with a thin white pubescence; wings hyaline and brilliantly iridescent; the

nervures black; the tegulæ testaceous at their outer margins; the calcaria at the apex of the tibiæ ferruginous. Abdomen: the margins of the segments constricted; the apical margins with bright silvery fasciæ, which, in certain lights, have a golden tinge more or less brilliant.

Hab. Ega.

Family Bembicidæ.

Genus BEMBEX, Fabr.

Bembex albofasciata.

Male. Length $7\frac{1}{2}$ lines. Black; the abdomen with six white fasciæ, attenuated in the middle, the first slightly interrupted. Head: the clypeus, a line at the inner orbit of the eyes, not extending to their summit, a narrow line behind them, the scape of the antennæ in front, the labrum, and mandibles white, the latter black at their tips; the flagellum pale beneath. Thorax covered with griseous pubescence; the legs white, with a yellow tinge; the coxæ, trochanters, anterior femora behind, and the intermediate and posterior pairs (except at their apex) black; the tibiæ with a black line behind; wings hyaline. Abdomen: the first and second fasciæ are about the middle of the segments, and the following at their basal margins; beneath, each segment has an angular spot at its apical margin laterally; the second segment has a compressed tubercle, its margin curved, its apex truncate; the sixth segment is subtuberculate.

Hab. Zulu country.

Bembex crabroniformis.

Male. Length 6 lines. Black; head, thorax, and base of the abdomen thinly covered with erect white pubescence; the abdomen with six equal yellow fasciæ, all slightly interrupted. Head: the base and apex of the scape of the antennæ in front, the anterior margin of the clypeus, the labrum, mandibles, and a narrow line behind the eyes yellow. Thorax: the posterior margin of the prothorax, a line surrounding the tubercles, and a spot close to the tegulæ yellow; the tips of the femora in front and the tibiæ and tarsi yellow; a black line on the tibiæ behind, but only towards the apex of the posterior pair; wings hyaline. Abdomen: all the fasciæ of nearly equal width, their anterior margins slightly waved; beneath, shining black, with a triangular spot at the side of each segment, at its apical margin a very narrow line emanates from each, but is not continuous to the middle of the segments.

Hab. Port Essington.

Bembex diversipennis.

Female. Length $10\frac{1}{2}$ lines. Head ferruginous; thorax and abdomen black, variegated with yellow; the wings brown, with one third of fore wings at their apex hyaline; the clypeus, labrum, and mandibles yellow, the latter black at their apex; antennæ ferruginous; a quadrate black spot on the vertex. Thorax: the posterior margin of the prothorax, the tubercles, tegulæ, and legs ferruginous; the coxæ, trochanters, and base of the femora black; a transverse curved line on the scutellum, postscutellum, and metathorax, as well as its posterior angles, yellow. Abdomen: the first segment has a large, irregular, somewhat quadrate spot on each side, the second segment a broad oblong yellow macula, which nearly meet in the middle and are deeply incised at their inner margin; the third and fourth segments with large maculæ that are suddenly narrowed and curve inwards and upwards, nearly uniting in the centre of the segment; the fifth segment with a large oblong macula on each side, that nearly meet in the centre of the segment; the sixth ferruginous at the apex; beneath immaculate.

Male. As large as the female; wings hyaline; head and scape of the antennæ yellow, with the flagellum ferruginous, its four apical joints swollen and distorted. Thorax as in the female. Abdomen black beneath and yellow above; the apical margins of the first and three following segments margined with black, the margins produced in the middle into a triangular shape; the first segment with a small semicircular black spot, from which emanates a line, which unites with the black margin; the second segment with two small, oblique, central black spots; the third with two larger spots at its basal margin; the three apical segments margined with ferruginous; a small, acute, compressed spine on the second ventral segment.

Hab. Angola.

Bembex severa.

Female. Length 8 lines. Black, smooth and shining; the thorax with yellow markings, those on the abdomen white. Head: the face and clypeus covered with fine short silvery pubescence, that on the vertex is long and griseous; a narrow yellow line behind the eyes. Thorax: the posterior margin of the prothorax, the tubercles, tegulæ, and a line over them on the mesothorax, an ovate spot on each side of the scutellum, two oblique spots on the postscutellum, which are sometimes united, yellow; occasionally two short yellow lines on the mesothorax anteriorly, or two minute spots, both

frequently obliterated; the anterior femora and the tibiæ in front, as well as the intermediate tibiæ in front, yellow; their tarsi yellow beneath; all the claw-joints yellow; the wings subhyaline, having a fuscous cloud in the middle. Abdomen: the first segment with an angulated spot on each side; the second and third segments with a curved line on each side, which unite in the middle of the segments; the fourth segment with two central minute oblique spots.

The male resembles the female, but has no spots on the thorax, and the posterior tibiæ and apex of the femora are also yellow beneath; the second ventral segment has a compressed obtuse tubercle in the middle, and the fasciæ above are more or less interrupted.

Hab. Australia (Swan River).

Bembex palmata.

Male. Length 8 lines. Yellow beneath and black above, with yellow markings. Head: a quadrate black spot on the vertex, the rest of the head yellow; the scape very stout; the flagellum gradually thickened to the apex of the eighth joint; the following joints much narrowed, and forming a hook-shaped termination; an elongate sulcation on each side of the clypeus and labrum. Thorax: the sides of the mesothorax above, a curved line on the scutellum, a line on the post-scutellum, and a curved transverse one crossing the metathorax yellow; the mesothorax has on its disk two pear-shaped spots, which are united to a narrow line which curves backwards to the base of the scutellum; wings hyaline; the anterior tibiæ expanded at their apex; the first joint of the tarsi dilated into an oblong concavo-convex process, which is fringed behind with black and ferruginous bristles. Abdomen yellow beneath and black above, each segment with a broad yellow fascia, which only leaves a narrow black apical margin; the second ventral segment compressed, forming a short tooth posteriorly.

Hab. N. Australia.

Bembex tridentifera.

Female. Length 7-8 lines. Black; the thorax with yellow markings, the abdomen with white ones. Head: the cheeks, the mandibles, labrum, clypeus, and a tridentate shape above it yellow; the tips of the mandibles and two minute spots at the base of the clypeus black; a line at the side of the scape and the flagellum of the antennæ above black. Thorax: the margin of the prothorax, a line over the tegulæ, which have a spot in front, a spot on each side both of the scutellum and postscutellum yellow; a minute black spot at the apex of the

femora ; the thorax at the sides, and also beneath, yellow, with a large quadrate black spot on the clypeus ; the legs yellow ; the wings hyaline. Abdomen : a triangular spot on each side of the first segment ; the three following segments have each a transverse undulating fascia in the middle, the fasciæ are suddenly enlarged laterally into subquadrate maculæ ; the fifth segment has an ovate spot on each side ; the first four ventral segments have on each side an ovate macula, each in succession smaller, the fourth minute.

Hab. Queensland (Moreton Bay).

Bembex flaviventris.

Female. Length 6-7 lines. Black above and variegated with yellow markings ; beneath entirely yellow. Head yellow, with the vertex and upper portion behind black ; antennæ yellow, with a black spot at the apex of the scape above ; the flagellum above, except the apical joint, black. Thorax : the margin of the prothorax, two abbreviated lines on the mesothorax in front, and two minute spots posteriorly close to the scutellum, which has a line at its lateral margins, a transverse line on the postscutellum, and an oblique one on each side of the metathorax inclining inwardly, yellow ; the legs bright yellow, with a narrow black line on the femora and tibiæ ; wings hyaline. Abdomen : each segment with a transverse undulating line, which is suddenly widened laterally, and the apical segment yellow.

Male very like the other sex ; but with a large, compressed, obtuse tubercle on the second ventral segment.

Hab. Australia (Swan River).

Bembex flavilabris.

Female. Length 6 lines. Black, with the labrum, tibiæ, and tarsi yellow ; abdomen with white fasciæ. Head : the clypeus and face with silvery pubescence, the vertex with white pubescence ; a line behind the eyes and the scape of the antennæ yellow in front. Thorax : the margin of the prothorax, the tubercles and the tegulæ behind, a spot on the mesothorax close to the tegulæ, a spot on each side of the scutellum, and the postscutellum yellow ; the anterior femora in front, and the apex of the intermediate and posterior pairs, yellow ; a black line on the anterior and intermediate tibiæ outside. Abdomen : an elongate white spot, pointed inwardly, on the first segment ; the three following segments have each an undulating white fascia, the first very slightly interrupted, all widening at the lateral margins ; beneath shining black.

Hab. W. Australia.

Bembex multipicta.

Female. Length $7\frac{1}{2}$ lines. Black, variegated with pale yellow markings; the abdomen with curved fasciæ, which are not united in the middle. Head: the mandibles, labrum, a broad line on each side of the face, the clypeus, a triangular spot above it, and two minute spots in front of the ocelli, and with a line behind the eyes, which becomes wider towards the base of the mandibles, yellow; the scape yellow in front; the base of the clypeus with a large bilobed black spot, and the tips of the mandibles black. Thorax: a narrow line on the posterior margin of the prothorax, two minute elongate spots on the disk of the mesothorax, a spot close to the tegulæ, an ovate one on each side of the scutellum, the postscutellum, a curved line across the metathorax, and an ovate spot at its posterior lateral angles yellow; legs yellow, with a black line on the tibiæ and tarsi behind; the wings hyaline. Abdomen: an interrupted broad waved fascia on the first segment; the following segments have on each side a subquadrate spot, from which a line curves backwards in a lunate form; the apical segment black; beneath, each segment has a lateral angular yellow spot.

Hab. Mexico (Oajaca).

A male from Brazil, which has the abdomen marked in the same manner as this species, is in the collection; it only differs in being entirely yellow beneath, a common sexual distinction, and is probably the true male of *B. multipicta*.

Bembex pallidipicta.

Female. Length 8 lines. Black; the head, thorax, and base of the abdomen densely covered with short white pubescence; the abdominal segments with broad glaucous fasciæ. Head: the mandibles, labrum, clypeus, sides of the face, a line behind the eyes, and the scape in front yellowish white; the flagellum fulvous beneath. Thorax: a narrow line on the margin of the prothorax, another over the tegulæ, and also one on the sides and posterior margin of the scutellum, a transverse one on the postscutellum, a curved one across the metathorax and its posterior angles, pale yellowish white; the legs of the same colour, with the femora more or less black behind; wings hyaline. Abdomen: the first fascia much narrowed in the middle, the second broad and suddenly widened laterally, the third slightly incised in the middle posteriorly, and the fourth has its anterior margin waved; beneath, each segment has a lateral triangular pale macula.

Hab. Mexico.

[To be continued.]